Title (en)

Synthesis of reversibly protected silanes

Title (de)

Synthese umkehrbar geschützter Silane

Title (fr)

Synthèse de silanes protégés de manière réversible

Publication

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Application

EP 11188089 A 20111107

Priority

US 41098610 P 20101108

Abstract (en)

The present invention discloses a method for synthesizing a reversibly protected organometallic compound, including reversibly protected silanes, which comprises (1) reacting an organometallic compound of the structural formula: A x -MX y with a hydroxyl group containing compound having a formula selected from the group consisting of: wherein M represents a member selected from the group consisting of silicon, germanium, tin, lead, titanium, hafnium, and zirconium; wherein A represents a hydrocarbyl moiety; wherein X represents a halogen atom; wherein x and y represent integers from 1 to 3; wherein the sum of x and y is 4; wherein n represents an integer from 1 to about 20; wherein m represents an integer from 0 to 20; wherein Z represents a group -C(R)(R 1)-; wherein R, R 1 , and R 2 can be the same or different and are selected from the group consisting of hydrogen atoms, alkyl groups, aryl groups, alkaryl groups, alkoxy groups, hydroxy groups, and halide atoms; wherein R * is selected from the group consisting of hydrogen atoms, alkyl groups, aryl groups, and alkaryl groups; wherein R, R 1 , R 2 , and R* can be bonded together in any combination in cases where R, R 1 , R 2 , and R * are not hydrogen atoms, halide atoms, or hydroxy groups; wherein Y represents a moiety selected from the group consisting of-C(R)(R 1)-, oxygen, sulfur, nitrogen, and phosphorus; wherein Z represents a moiety selected from the group consisting of -C(R)(R 1), oxygen, sulfur, nitrogen, and phosphorus; with the proviso that Y and Z can not both represent the moiety -C(R)(R 1)-; to produce a solution containing the reversibly protected organometallic compound and hydrogen chloride; (2) reacting the solution containing the reversibly protected organometallic compound and the hydrogen chloride with a trialkyl amine to precipitate the hydrogen chloride from the solution; and (3) recovering the reversibly protected organometallic compound from the solution of the reversibly protected organometallic compound.

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Citation (applicant)

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